

- (a) Technical literature, including electronic technical manuals (ETMs) and interactive ETMs (IETMs), for the execution of field maintenance operations.
 - (b) Army doctrine and training for improved methods, procedures, and combat service support.
 - (c) Fleet life-cycle management and inventory management programs at USAMC national inventory control point (NICP) and its associated program management organizations.
- (2) Materiel developers will ensure that embedded diagnostic and prognostic technologies and AIT are incorporated in design and development of new equipment and major weapon systems and upgrades of existing weapon systems and equipment end items.
- k. Transportability/mobility will be included in the design and selection of any maintenance support equipment.
 - l. Information and reporting systems will be established to—
 - (1) Measure the effectiveness of materiel maintenance and management at all levels.
 - (2) Identify the frequency of materiel failures and effect corrective action.
 - (3) Develop maintenance support parameters for future materiel systems.
 - (4) Update the logistics database of the materiel proponent and other logistics planning elements of the Army.
 - (5) Compute initial repair parts required to support repair or overhaul programs for both contract and organic activities at retail and wholesale levels.
 - (6) Track materiel changes.
 - (7) Permit serial number tracking of selected parts, components, and end items.
 - m. Modification/modernization of equipment by wholesale maintenance activities will be performed and reported per AR 750–10.
 - n. Maximum repair cost or maximum permissible overhaul costs/MEL will be established by the appropriate materiel proponent for each materiel weapon system or equipment and its subsystems, assemblies, modules, and components.
 - o. Army depot maintenance capabilities and capacities will be developed within guidelines established by DOD Directive (DODD) 4151.18 to—
 - (1) Acquire and maintain suitable levels of technical competence.
 - (2) Execute the depot-level maintenance workload requirements for mission-essential weapons, systems, or equipment during the life cycle.
 - (3) Provide technical support to all echelons of maintenance below depot as needed.
 - (4) Provide for mobilization and surge requirements.
 - (5) Tailor FRA depot maintenance workload to a level of effort that best accommodates user needs for responsive logistics support on mission-critical systems and equipment.
 - p. Maintenance tooling, accessory shop materiel, machine tools, and TMDE will be modernized as cost effectiveness and the need for advanced technology dictate.
 - q. Acquisition, calibration, repair, and certification of TMDE will be accomplished per AR 750–43 and EM 0022 as part of wholesale maintenance support.
 - r. Use of U.S. Army-preferred TMDE will be stressed for all levels of maintenance during the design and acquisition phases of the materiel system. TMDE used to support materiel repair will be selected per AR 750–43.
 - s. Depot-level maintenance SOR analysis will be conducted and documented as part of the milestone II ASARC or equivalent review for acquisition category (ACAT) II and below programs for all newly acquired systems and modifications per AR 70–1.
 - t. An organic depot maintenance capability will be established for all newly acquired systems or modifications that have been designated as core within 4 years of initial operational capability date per AR 70–1. Core analysis procedures are outlined in paragraph E–2 of this regulation.

Chapter 4

Maintenance Operations

Section I

Materiel Repair and Evacuation

4–1. General

- a. Proper performance of PMCS by the equipment operator will ensure early detection of faults and need for required maintenance.
- b. MACs specify what tasks can be performed at each level of maintenance.
- c. To ensure the most cost-effective use of maintenance resources, the economic reparability of unserviceable

materiel will be determined by DS/GS/AVIM units per paragraph 4–5 prior to initiating any action to repair the materiel.

d. The decision to repair or evacuate materiel is based on the maintenance repair and recoverability codes, urgency of need, and mission, enemy, time, terrain, and troops-available (METTT) analysis.

e. Uneconomically repairable materiel will not be evacuated beyond the level authorized to dispose of or reuse the materiel.

f. All actions relative to the inspection, classification, verification, and disposition of uneconomically repairable materiel will be accomplished in an accurate and timely manner.

g. Materiel will be disposed of per AR 710–2.

4–2. Unserviceable materiel

a. Unserviceable end items that cannot be repaired promptly at unit level will be evacuated to the supporting maintenance activity, or turned in through the appropriate supply support activity.

b. DS and GS maintenance units will provide backup support to supported units.

c. Materiel will be protected (packaged/crated) to prevent further damage during evacuation. This includes all BII and components.

d. DS and GS maintenance units will promptly evacuate unserviceable materiel that they do not intend to repair in accordance with AR 710–2.

4–3. Technical inspections

a. A technical inspection (TI) will be performed prior to repair, evacuation, or turn-in of unserviceable end items or components. TIs are to be made by a technically qualified individual(s) who is assigned to a unit, DS, GS or installation-level maintenance activity. Inspections will be performed according to equipment maintenance and serviceability standards applicable to the maintenance level performing the repair. The results of the TIs are used to—

(1) Verify serviceability.

(2) Determine the economic reparability of the item.

(3) Determine the extent of maintenance effort and repair parts required to restore the item to the prescribed serviceable condition.

(4) Determine if unserviceable items were rendered unserviceable due to other than fair wear and tear.

(5) Determine estimated cost of damage (ECOD).

(6) Determine if all applicable MWOs have been applied.

b. TI sheets will accompany all requests for disposition to the NICP. An inspector, maintenance technician, or maintenance/motor officer as specified by the unit commander will verify each request. The TI sheet will accompany the full-time equivalent turn-in documentation to the managing NICP so that accurate disposition instructions can be provided about the major end item.

c. When a technical inspector at DS, GS, or installation maintenance levels detects damage to an end item/class IX component through other than fair wear and tear, this damage will be documented on DA Form 2404/DA Form 5988–E/DA Form 2408–13–3 (Aircraft Technical Inspection Worksheet). The inspector's rationale for this determination will also be included on the form. A copy of DA Form 2404/DA Form 5988–E will be forwarded to the battalion or equivalent level commander of the unit that ordered the work on or turned in the damaged end item/class IX component. The commander will determine if further action should be taken under the provisions of AR 735–5. Damaged property should be released for repair or turn-in as soon as the inspector has physically examined the damaged property; turn-in or repair of a damaged end item or component will not be started until AR 735–5 requirements are satisfied (see AR 735–5, para 13–29c).

d. When an owning unit suspects that damage to the end item/class IX component has been caused by negligence or willful misconduct, a work order for the component should be sent to the supporting maintenance activity for determination of ECOD. After completion of the ECOD, the end item/class IX component will be turned in or a work order for repair will be created as soon as possible, consistent with evidentiary requirements of AR 735–5.

e. When the TI supports an investigation of pecuniary liability and actual costs cannot be determined, inspectors will prepare an ECOD. Basic policy guidance for an ECOD in support of a report of survey is in AR 735–5.

f. DA Form 2404/DA Form 5988–E/DA Form 2408–13–3 will be used to record results of technical inspections.

4–4. Verification inspections

Verification inspections of major end items ensure the accuracy of a TI when it results in unserviceable, uneconomically repairable condition codes (CC) of H or P.

a. MACOM commanders without subordinate installations and installation commanders will—

(1) Ensure that technical inspections resulting in unserviceable, uneconomically repairable CCs of H or P are verified using independent inspections prior to requesting disposition instructions per AR 710–2. The individual performing the initial CC classification will not perform verification inspection.

(2) Ensure that inspectors conducting verification inspections are technically qualified in the equipment commodity they are inspecting.

b. The recording of a verification inspection will be done by typing or stamping a statement on the original inspection form. The required data elements are—

- (1) Organization of the verifying inspector.
- (2) Inspector's name and grade.
- (3) Date of inspection.
- (4) Signature of inspector.

c. Major end items with CC of H or P that fail a verification inspection will be referred to the maintenance officer with the corrected classification. The maintenance officer will determine further action required to repair the item.

4-5. Maintenance expenditure limit

a. MEL is the total acceptable one-time cost to repair an end item or reparable component to a fully serviceable condition as prescribed in the appropriate TM. Current MELs and MEL procedures are listed in the TB 43-0002-series and TB 750-series. The managing NICP should be contacted if unsure of the current MEL. There may be instances when the MEL for a major end item has changed, and the change has not yet posted in either TB 43-0002-series or the TB 750-series.

(1) MEL is used to ensure economic and operational effectiveness of Army maintenance at all levels. Depot-level assistance may be obtained through the LAO.

(2) Required repairs will not be broken into separate job estimates to bypass prescribed MELs.

b. MEL will be expressed as a percentage of the unit replacement price.

(1) MEL will be reviewed at least annually and updated as required.

(2) MELs will be established for all items except the following:

(a) Materiel procured with nonappropriated funds.

(b) Real property fixtures.

(c) Non-type-classified training devices used exclusively by training institutions and schools.

(d) Non-type-classified equipment and items of nonstandard materiel that do not require national-level wholesale materiel management or logistics support.

(e) Materiel exempt from type classification.

(f) Class V materiel.

c. Unit replacement price:

(1) For end items, the planning prices in the AMDF will be the source for the replacement price.

(2) The AMDF as published in FED LOG will be used to establish the replacement price for reparable components and repair parts.

d. Local/geographical costs will be used for overhead and labor costs.

e. MACOM commanders have one-time approval authority on requests for waiver of published MEL when the required maintenance can be accomplished at DS and GS levels of maintenance or by local contract. One-time approval authority is limited to a specific model or serial-numbered major end item. Only the appropriate NICP has the authority to issue fleet waivers. In approving such requests, commanders will ensure—

(1) A replacement item is not available by the RDD.

(2) Resources are available or can be made available to the requesting organization to do the repairs prior to the RDD.

(3) Requesting organizations submit a repair cost estimate and justification for retention.

f. The following direct costs will be used to determine repair cost estimates when faults are found during technical inspections:

(1) *Direct labor.* Direct labor is that labor (civilian or military) that can be specifically identified to the repair to be performed. Direct labor involves only personnel in direct productive contact with the item or service involved. This does not include initial inspection. To estimate direct labor costs, determine/estimate the direct labor man-hours required and multiply by the appropriate hourly labor rate.

(a) *Direct labor man-hours.* The determination of the direct labor man-hours to be applied will be based on working-hour requirements for maintenance tasks listed in applicable equipment publications; commercial flat-rate manuals, when appropriate; similar work performed previously; or individual experience. The direct labor man-hours will be periodically reviewed and updated, if necessary.

(b) *Civilian labor rates.* The cost of civilian labor will be based on a labor rate for the work center that will perform the work. The servicing finance and accounting office, whether determined from annual salaries or hourly wage rates, will provide labor rates.

(c) *Military labor rates.* Labor rates for military personnel will be the average military wage rate for the work center performing the work. The servicing finance and accounting office will provide these rates.

(d) *Established labor rates.* MACOM commanders and directors of agencies may establish and use standard hourly

rates for direct and indirect (or overhead) labor as long as such rates are consistent with DFAS-IN Regulation 37-1. When such standard rates are established, separate rates are established for each category of supportable materiel, commodity group of equipment, and weapon system. A separate standard labor rate will be established for each major geographical area where wage levels vary significantly.

(2) *Materiel*. The cost to repair includes all materiel, including procurement appropriations funded materiel, directly applied to the particular equipment-undergoing repair.

(a) The cost of consumable items received from the supply system may be set as billed by the supply agency. If no billing is available, the cost of consumables is set at the standard inventory price as published in appropriate supply manuals or FED LOG. Items procured from local sources are priced at the latest invoice cost. Cost of items fabricated will be based on actual cost, where possible. When actual cost is not available, engineering estimates, including indirect expenses, will be used.

(b) The cost of Government-furnished materiel expended by a contractor in performing all or part of the repair will be the standard inventory price.

(c) The cost of replacement components and assemblies used in the repair process will be set at the standard inventory price. Credit is taken for the return of the reparable component in an amount equal to the current standard inventory price less the estimated cost to repair the component.

(d) Freight will not be included as an element of cost when the equipment to be repaired is located in CONUS. When the equipment to be repaired is located overseas and no local capability to repair exists, the cost of freight to CONUS will be included as an element of cost. The cost of freight will include all transportation and handling costs from point of use to designated CONUS point of repair.

(e) When equipment cannot be repaired on-site and costs are incurred to prepare the equipment for shipment, such costs (including materiel) will be included in the estimate of cost to repair regardless of origin or destination.

g. Indirect costs to be included will be determined by applying the indirect or overhead rate (computed using DFAS-IN Regulation 37-1) to the estimated direct labor man-hours. The indirect expense rate will include the following:

(1) *Manufacture or production expenses*. These expenses are costs incurred within or identifiable to the maintenance shop or organization performing the repair work, although not identifiable to particular jobs.

(2) *General and administrative expenses*. These expenses are costs incurred in the general management or supervision of the installation as a whole that are allocated among maintenance and other activities.

h. Miscellaneous costs of repair will include all contractual services acquired incidental to, and identifiable with, the performance of all or a portion of the specific repair. All other costs required to accomplish the repair that are directly identifiable with the equipment will be included except those directly named in *j*, below.

i. Items of operating expense will include all scheduled and unscheduled services and repairs that are accomplished by the using organization, including repair parts. These costs will be included when the item being repaired is excess to unit needs, was damaged accidentally, or is repaired by higher-level maintenance on a nonreturn basis. (See exceptions in *j*, below.)

j. The following costs will not be included in the estimate of cost to repair:

(1) Replacement of basic issue list items.

(2) The labor cost of applying MWOs.

(3) The cost to overhaul or replace accessory items used to adapt equipment for special uses, including such items as rank insignia, winterization kits, flashing lights, two-way radios, tool kits, and similar items. Individual estimates to overhaul such items will be made as appropriate and required.

(4) Items of operating expense, when the item being repaired is not excess to unit needs, has not been accidentally damaged, or is repaired by higher-level maintenance on a return-to-user basis. Items of operating expense include all NSNs listed in the respective organization and support maintenance repair parts and special tools list (RPSTL).

(5) The cost to replace missing tools for those sets, kits, and outfits that are subject to MEL.

4-6. Equipment transfer and turn-in

a. All transfers and turn-ins must be formalized through an MOA between MACOMs. Equipment that is transferred between MACOMs—including Army Reserve and Army National Guard—transferred into Army prepositioned stocks, prepared for storage below wholesale level, and other specified stocks, will meet the following requirements:

(1) The maintenance standard as defined in paragraph 3-2.

(2) Scheduled services will be performed if 90 percent of service interval (using criteria outlined in applicable schedule) has expired as of the transfer date reflected in disposition instructions from the wholesale manager. The criteria for services of time are suspended during shipment and will resume upon acceptance at gaining site.

(3) Equipment to be transferred should be inspected by the losing command a minimum of 120 days prior to the transfer date, allowing parts to be requisitioned and received so that corrective actions can be completed prior to the acceptance inspection. Equipment being transferred should be inspected for acceptance by the receiving command or appropriate agency a minimum of 60 days prior to transfer date. This inspection serves as the final acceptance inspection and certifies that the item is at the maintenance standard or establishes corrective action required by the

losing MACOM unit before transfer. It also serves as a baseline for the verification of equipment condition at the receiving location. MACOMs and agencies are responsible for funding temporary duty (TDY) related to their responsibilities for inspections as outlined.

(4) The results of TM 10- and 20-series PMCS and PMIS acceptance inspections (record copy of DA Form 2404/DA Form 5988-E/DA Form 2408-13-3) and other records required by DA Pam 738-750 and DA Pam 738-751 will accompany the equipment.

(5) Gun tubes will have a minimum of 500 rounds of effective full charge (EFC) remaining when transferred into APS stocks. On transfers other than into Army war reserve stocks, gun tubes will have a minimum of 75 EFC rounds remaining.

(6) Equipment accepted for depot overhaul via the Combat Vehicle Evaluation (CVE) program or identified as a depot recapitalization candidate per MOA/mission training plan will not be directly transferred between MACOMs.

b. Equipment transfer between MACOMs in unit sets (force package fielding) will meet the following requirements in addition to those in *a*, above:

(1) Requisitions for repair parts with estimated delivery dates past the transfer date will be canceled. Appropriate funds (price from current FED LOG) will be transferred to USAMC as specified in the MOA.

(2) Outstanding DS (or higher) maintenance requests that cannot be completed prior to transfer will—

(a) Require the gaining and losing MACOMs to negotiate an acceptable solution such as delayed transfer dates for specific pieces of equipment. Agreement requires concurrence of DCS, G-3.

(b) Be cancelled. Appropriate funds (current FED LOG price) will be transferred to USAMC as outlined in transfer MOA.

(3) MACOMs/agencies are responsible for funding TDY related to their responsibilities for transfers as outlined above.

c. USAMC responsibilities for unit set transfers between MACOMs are—

(1) Serve as arbitrator for inspections outlined in *a*(3), above, unless USAMC is an active party in the transfer. In all matters concerning this type of transfer the arbitrator is DALO-SMM.

(2) Receive funds transferred from losing MACOMs as outlined in *b*(2)(*b*), above.

(3) Perform corrective actions at the receiving/handoff site to ensure equipment is in the same condition as reflected by record copy of acceptance inspection required in *a*(3) and (4), above.

(4) Provide total package fielding support to gaining MACOM.

d. Equipment transferred between MACOMs in other than unit sets will meet the requirements in *b*(2)(*a*), above. In addition, equipment will not be transferred until all corrective actions requiring parts are completed and DS and higher maintenance requests are completed.

e. MACOM commanders will establish the standard for materiel transferred between units within the MACOM, except for materiel being transferred within the MACOM from an active Army unit to a Reserve component; this materiel will be transferred in accordance with the requirements of *a*, above. Use of TM 10- and 20-series PMCS maintenance standard is encouraged. MACOM commanders will provide necessary maintenance resources and assign responsibility for repair of materiel in the MACOM.

f. Equipment turn-in will be made in accordance with the applicable provisions of AR 710-2. The following special maintenance management provisions also apply:

(1) It is Army policy that equipment selected for repair in depot maintenance facilities arrive at the depot repair site in the same or better condition of serviceability as when originally selected (TI performed and recorded on DA Form 2404/DA Form 5988-E/DA Form 2408-13-3) for induction into depot maintenance programs. Commanders of USAMC MSCs will conduct depot maintenance evaluations and/or TIs and will use them for programming depot maintenance workloads and related purposes.

(a) Property book items and other end items of equipment that have been inspected, evaluated, and accepted as candidates for induction into USAMC depot maintenance programs will be promptly turned in to the supporting SSA.

(b) In cases where the depot candidate item cannot be promptly shipped to the depot repair site for immediate induction, the unit commander may retain custody and/or operational use of the accepted item. Some of these items may still be mission capable (MC). In all such cases, the owning/custodial commander will retain the induction candidate item at the same level of serviceability as specified on the depot evaluation/TI noted in (1), above. To ensure that these candidate items are in the same or better condition of serviceability, the equipment being turned in will be reinspected for acceptance by the receiving command, or appropriate agency, a minimum of 90 days prior to turn-in. This reinspection will be based on the original qualifying inspection noted in (1), above.

(c) Cannibalization of depot maintenance candidate items and controlled exchange of component parts by field organizations are prohibited. Exceptions will be made only in urgent cases of field operational readiness requirements and then only with the written concurrence of the USAMC MSC commander.

(2) Materiel at unit level that is excess as a result of changes in authorization documents or displaced equipment will be turned in using the standard outlined in *a*, above. USAMC may provide an exception for equipment accepted for depot overhaul or rebuild, recapitalization, equipment being disposed of, or other equipment if an appropriate reason

exists. Other excess materiel (that is, found on post) may be turned in to the supporting supply activity in an “as is” condition.

(3) Turned-in materiel staying in the physical custody of units but on the property accounts at SSA or higher levels:

(a) This materiel will not be scheduled for repair or maintenance services unless directed by the command having property accounting responsibility (for example, SSA or NICP).

(b) Commanders will ensure that these items are not cannibalized or involved in controlled exchange without prior authorization from the NICP.

(4) Items found on post may be turned in to the supporting SSA in an as is condition in accordance with (2), above; however, commanders will take responsible action to maintain the value, utility, and security of Government property while it is in unit custody.

g. Exceptions are as follows:

(1) Aviation equipment transferred between property accounts will conform to the serviceability criteria contained in TM 1-1500-328-23.

(2) Equipment that is used as training aids and assembled and disassembled (CC “F” or less) requires depot overhaul prior to transfer or reissue. Equipment used for base operations or for the original purpose operator/crew training will meet the transfer/turn-in standard in accordance with a, above.

4-7. Controlled exchange

a. Controlled exchange is the removal of serviceable components from unserviceable, economically repairable end items for immediate reuse in restoring a like item or weapon system to an MC condition. The unserviceable component must be used to replace the serviceable component or retained with the end item that provided the serviceable component.

b. Controlled exchange is authorized only when—

(1) Required components are not available from the source of supply within the IPD indicated on the maintenance request.

(2) A valid requisition is submitted to replace the unserviceable item.

(3) The maintenance effort required to restore all of the unserviceable repairable materiel involved to an MC condition is within the MAC authorization and the capability of the unit performing the controlled exchange.

(4) The end item or weapon system from which the serviceable component is removed is classified not mission capable supply (NMCS).

(5) Aircraft from which a serviceable component is removed must be classified as one of the following: NMCS, not mission capable maintenance (NMCM), or partially mission capable (PMC).

(6) Aircraft maintenance manual instructions require that a known serviceable component be temporarily used while troubleshooting. Such components may be temporarily exchanged from an FMC or PMC aircraft.

(7) The end item or weapon system will not be degraded to an uneconomically repairable condition.

(8) The end item or weapon system from which the serviceable component was removed is protected from further degradation.

(9) The unserviceable component is tagged and installed on, or retained with, the end item or weapon system from which the serviceable like item was removed. In addition, the removal of the component must be recorded on the DA Form 2407/DA Form 5990-E or DA Form 2404/DA Form 5988-E or DA Form 2408-13-3 for the end item or weapon system. This is to retain the identity and integrity of the repairable end item or weapon system.

(10) The organization performing the controlled exchange takes prompt action to restore the unserviceable materiel to an FMC condition.

c. When the controlled exchange satisfies a requirement already in the Army supply system, that requisition will be either canceled or used to restore the unserviceable end item or weapon system to FMC.

d. Controlled exchange by using units is authorized only when—

(1) All of the unserviceable repairable materiel involved is owned or under control of the organization performing the controlled exchange.

(2) It is the only means reasonably available to eliminate an adverse effect on the operational readiness of the unit, organization, or activity performing the controlled exchange.

(3) Approved by the commander of the organization performing the controlled exchange.

e. Controlled exchange by DS, AVIM, and GS levels of maintenance will be authorized only when—

(1) It is the only means of providing an FMC end item or weapon system to a supported unit within the time frame indicated by the IPD on the maintenance request.

(2) Approved by the DS/GS commander, IMMO, or his or her designated representative.

f. During mobilization or combat, MACOM commanders may modify the controlled exchange conditions as deemed necessary.

g. Controlled exchange is not authorized when the investigating officer has not formally released the materiel involved in an accident.

- h.* Controlled exchange is not authorized on ORF assets.
- i.* Control exchange documents and a controlled exchange log will be maintained for 1 year (calendar year or fiscal year). Documentation will be filed under the file number 750–1a (ARIMS).

4–8. Cannibalization of materiel

a. Cannibalization is the authorized removal of components from materiel designated for disposal. Cannibalization supplements supply operations by providing assets not immediately available through the Army supply system. Costs to cannibalize, urgency of need, and degradation to resale value of the end item should be considered in the determination to cannibalize.

b. Materiel awaiting disposition instructions from an NICP will not be cannibalized without prior approval of the owning NICP.

c. Policies and procedures for establishment and operation of cannibalization points are contained in AR 710–2 and DA Pam 710–2–2.

d. During combat, commanders may authorize the cannibalization of disabled equipment only to facilitate repair of other equipment for return to combat. No parts will be cannibalized for stockage. However, service collection/classification companies—standard requirement code 43439L0—have the explicit mission to remove items for return to stock in accordance with section I of their TOE.

Section II

Operations Management

4–9. Materiel records and reports

Materiel data records and reports for maintenance management and performance of maintenance are prepared and maintained as prescribed in DA Pam 738–750, DA Pam 738–751, and AR 700–138.

4–10. Measurement of maintenance performance

a. The management of maintenance operations throughout the Army will be based upon a performance management approach that supports the Army management philosophy described in AR 5–1. This approach will enable the maintenance organization to develop a unified effort around goals and objectives.

b. The planning and controlling functions of management will be emphasized to ensure that—

- (1) Objectives are established to support mission goals.
- (2) Performance is measured against quantifiable standards that reflect the objectives.
- (3) Corrective actions taken are based on improving the factors that are constraining performance.

c. Maintenance performance measures are the key element of the control function of maintenance operations management. Through use of performance measures, commanders and managers will ensure that their maintenance operation is providing the best possible support to sustain combat readiness.

4–11. Unit-level management

Commanders and managers will manage their unit-level maintenance per the procedures contained in FM 4–30.3 and DA Pam 750–35.

4–12. Manpower utilization standards

a. The MACOMs will ensure establishment of a man-hour accounting system where automated capability exists. Man-hour accounting is optional where automation is not available and manual procedures must be used. However, the utilization of maintenance manpower resources for mission accomplishment is a mandatory command/management function in Army organizations.

b. Unit commanders and IMMOs are responsible for using assigned military and civilian maintenance personnel. The maintenance supervisor is directly responsible for using available maintenance personnel. AR 570–4 provides policy for the availability of personnel in peacetime. Appendix B provides guidance to commanders and managers on the computation and use of manpower utilization rates. The following are DA-directed minimum standards and maintenance man-hour utilization rates:

- (1) The standard for using assigned civilian personnel in maintenance operations is 85 percent of the time available for duty.
- (2) The standard for using available military personnel in maintenance operations is 50 percent of the time available for duty.

c. In addition to these standards, appendix C determines the tactical maintenance augmentation requirements for military mechanics during peacetime garrison operations.

4-13. Maintenance management systems

- a.* The primary functions of maintenance management include forecasting, distribution, scheduling, and production control of maintenance workloads.
- b.* The STAMIS will take precedence over all manual, MACOM standard or installation-unique systems for Army maintenance management. Management procedures for the STAMIS are in the applicable system user manual.
- c.* When a materiel maintenance STAMIS is fielded, the requirement for manual system forms, such as signature cards, will be discontinued and automated forms will be routinely accepted.
- d.* TAMMS and TAMMS-Aviation (TAMMS-A) database will be maintained by USAMC.
- e.* The ULLS is the DA standard system to automate TAMMS and TAMMS-A at the unit level as described in DA Pam 738-750 and DA Pam 738-751.
- f.* The SAMS is the DA standard automation system to support maintenance at the DS/GS and installation levels of maintenance.
- g.* The maintenance module of the DA standard multicommand system for the Army Medical Department Property Accounting System is the automated maintenance management system for TDA medical maintenance activities. MTOE MED maintenance units use the Theater Army Medical Management Information System (TAMMIS).

4-14. The work order logistics file

- a.* The WOLF is a national-level database of historical maintenance data that are received from DS, GS, and AVIM maintenance units worldwide. All active Army, Reserve, National Guard units, and contractors will report monthly closed work order (DA Form 2407/SAMS equivalent) information to LOGSA by the 10th day of the following month. (High volume outside the continental United States (OCONUS) organizations may submit partial reports on a weekly basis at their discretion.) WOLF data are critical to Army planning and programming, and it is essential that commanders at all levels ensure the timely, accurate reporting of maintenance actions into the WOLF. WOLF additionally serves as a critical data source for tools, test equipment, and personnel data in determining maintenance structure and maintenance support requirements.
- b.* WOLF data are a portion of the LIDB at LOGSA. LOGSA is responsible for ensuring that the WOLF database is compatible with the needs of the Army and is fully compatible with existing and emerging STAMIS systems. LOGSA also must perform yearly customer reviews to ensure that the needs of the Army are being met.
- c.* Commanders will ensure that any changes to DOD activity address code or UIC associations within their organizations are promptly reported to LOGSA.
- d.* Commanders at all levels will ensure that trained personnel and established SOPs are in place to meet the automated reporting requirements.

Section III

Technical Assistance and Supply Interface

4-15. Technical assistance

Effective maintenance support of materiel combines the maintenance conducted by the using activity and its supporting maintenance activity. Supporting maintenance activities must maintain a proactive liaison to assist using activities in accomplishing their materiel maintenance responsibilities.

4-16. Logistics Assistance Program/logistics support element

- a.* AR 700-4 contains policy and procedures for providing technical assistance to users during and after equipment fielding.
- b.* The CG, USAMC provides and manages a USAMC worldwide LAP for proponent materiel by determining requirements and establishing, staffing, and maintaining LAOs. The Chief of Engineers (COE), TSG, CG, U.S. Army Signal Command (USASC), and CG, U.S. Army Intelligence and Security Command provide logistics assistance personnel for materiel under their proponentcy.
- c.* Logistics assistance personnel will be technically knowledgeable of assigned materiel, Army field maintenance organizations and operations, and the wholesale and retail supply system. The installation POC for the Integrated Logistics Analysis Program is the LAO.
- d.* In accordance with FM 4-30.3, the LSE is a command and control team designed to supervise and/or coordinate all in-theater support provided by applicable USAMC activities, either permanently assigned to theater or deployed on a temporary basis for specific missions. It is the forward element of the national logistics base that provides support at the operational and tactical levels across the spectrum of military operations, including supporting multinational and joint operations.

4-17. Repair parts supply (class IX)

- a.* Repair parts allocation, stockage, and supply policies and procedures are contained in AR 710-2, AR 420-18, DA Pam 710-2-1, DA Pam 710-2-2, and associated automated systems TMs.

- b.* AR 710–2 controls recovery of reparable secondary materiel.

Section IV

Contract Maintenance Support

4–18. Private enterprise

a. When the Army maintenance system cannot provide required support, the Army will rely on the domestic and foreign competitive private enterprise system to support its maintenance requirements.

b. The MACOMs will ensure that essential quality requirements for maintenance service contracts are defined, quantified, measured, and assessed during the contracted-out support process. Solicitations and contracts for maintenance services will require—

- (1) Quantitative measures of quality and performance.
- (2) Contractors to submit historical data that will show the capability to achieve these quantitative measures. These data are used in the solicitation review process.
- (3) Specific contractual provisions for obtaining contractor conformance, such as award and incentive fee provisions for meeting performance quality and cost standards.
- (4) Test and evaluation to be performed to demonstrate performance and corrective actions to be taken on deficiencies revealed.

c. Commanders contracting for commercial organizational DS- or GS-level repair of equipment will ensure that these contracts include provisions for collection of work order (DA Form 2407/SAMS equivalent) data from the contractor. Contractors will provide (DA Form 2407/SAMS equivalent) data via automated means to the WOLF.

d. Any contract for commercial application of MWOs will include provisions that MWOs will be applied and reported in accordance with AR 750–10.

4–19. Prohibitions

a. Maintenance by contract personnel is prohibited when—

- (1) The maintenance workload to be performed is necessary for individual and unit training.
- (2) A satisfactory commercial source is not available and cannot be developed in time to provide maintenance support when needed.
- (3) In-house resources are available and contract maintenance support will result in higher cost of maintenance support to the Army.
- (4) The product or service is available from another DOD component or another Federal department or agency.

b. Restrictions are as follows:

- (1) Contractors will not be permanently stationed forward of the division rear boundary. (Also see AR 715–9.)
- (2) The contractor may travel forward of the division rear boundary on a case-by-case basis to provide temporary on-site maintenance if the senior military commander determines that contractor services are required at lower echelons.

4–20. Foreign enterprise limitations

a. Foreign private enterprise can be used for contracts awarded and performed OCONUS only in the following situations:

- (1) U.S. contractor or DOD sources lack the organic capacity to perform the task in the time required. In this situation, use of foreign private enterprise is interim in nature until U.S. capability can be developed or expanded.
- (2) Use of foreign private enterprise has been predetermined by international agreement.
- (3) The necessity for establishing an alternate foreign source has been determined formally by DOD as being in the best interests of U.S. strategic or tactical objectives.
- (4) Use of foreign private enterprise will not affect the development or maintenance of U.S. national capabilities.

b. The use of foreign contractual services will be contingent on U.S. contracting authority certification of quality, capability, and capacity.

4–21. Readiness of MTOE units

Contractual services to support readiness of MTOE units will be allowed—but generally limited to a short-term basis—

a. Pending the attainment of a unit, DS or GS organic capability, or to allow for peak workloads of a transitory nature. For OCONUS, when the using unit, the local IMMA, and DS/GS units do not have the capability to provide unit-level maintenance to an acceptable level of readiness.

b. When required, programmed, and contracted by the materiel developer for an interim period to attain an earlier operational status for initial fielding of new military materiel.

c. For the completion of overhaul or modification of military materiel when—

(1) The extent or complexity of the modification or modernization work to be accomplished requires the technical qualifications of the original equipment manufacturer.

(2) Repairing complex electronic devices that require long-term training for skill development and expensive stand-alone test equipment.

4-22. Contingency plans

Contingency planners will consider the maintenance potential of facilities in overseas areas that may be operated under military control or by contractual arrangement with commercial sources.

4-23. Classified communications security

All proposals for contract maintenance support of classified COMSEC/signals intelligence (SIGINT) and electronic warfare (EW) equipment must undergo an assessment of risks to national security prior to using commercial maintenance sources. The National Security Agency (NSA) must conduct this special risk assessment. The proposal, including performance work statements (PWS) with additional information identifying the COMSEC/SIGINT and EW equipment, density supported, and levels of maintenance to be performed, should be submitted through Deputy Chief of Staff, G-3, ATTN: DAMO-C4T, 400 Army Pentagon, Washington, DC 20310-0400, to Director, National Security Agency, ATTN: S-04, Fort Meade, MD 20755-6000. Classified equipment not under NSA cognizance being considered for maintenance support contracts to contractors other than original equipment manufacturers will be given an assessment of risk as prescribed above. Approval by HQDA is required prior to contract award. In the event of approval from NSA and/or HQDA, then the provisions of chapter 5, section III apply to further processing.

Section V

Inter-Service Maintenance Support

4-24. General

The ISSAs will be fully explored prior to submission of requests through MACOMs to HQDA (DALO-SMM) for additional or expanded organic maintenance facilities. This includes modernization of tooling and materiel of non-MTOE support and depot-level maintenance facilities. ISSAs will be used to provide maintenance support services when—

- a. This means is the least costly to the Government.
- b. Materiel to be supported is common to the U.S. Army and another Service.
- c. The supporting agency or component has the available capability to render such support.
- d. The provision of such support provides for a reduction in NMC materiel and/or provides the potential for reducing investment and operating support costs.

4-25. Exceptions

The ISSAs will not be used—

- a. To document transfer of responsibility for a function or mission from one DOD component to another.
- b. When an organic support capability and capacity for this service is required to sustain military readiness.

4-26. Personnel support

When another DOD component or Federal Government agency has the available capability, with the exception of personnel, and the provision of the support is to the overall advantage of the Government, the matter will be referred to HQDA (DALO-SMM) for resolution prior to establishing duplicate facilities.

4-27. Reciprocal support

Upon request, the Army will provide maintenance support to other DOD components and Federal Government agencies to the extent that its military requirements will permit and if available capabilities and capacities exist. This support will be executed at the lowest practicable command level.

4-28. Funding support

Each Army element is responsible for programming, budgeting, and funding to support the ISSAs to which it is a party. Whenever manpower or fund requirements exceed available resources, MACOM commanders will seek HQDA (DALO-SMM) approval.

4-29. Provisions of ISSAs

The ISSAs will—

- a. Specify responsibilities for furnishing repair parts and other support materials required for the completion of the maintenance operations. Normally, materials are provided by the agency or component furnishing the service.

- b.* Make suitable provisions for the interchange of maintenance performance and management data between all parties to the agreement.
- c.* Contain provisions for review every 2 years to determine whether the agreement should be continued, modified, or terminated.

4–30. Transfer of resources

- a.* The transfer of resources (personnel, funds, and materiel) resulting from establishment, modification, or termination of local support agreements will be accomplished per existing Army and DOD procedures.
- b.* Army agencies will provide inter-Service support on a reimbursable basis. Nonreimbursement arrangements are authorized for service provided in combat areas.

Chapter 5

Commodity-Oriented Maintenance Policies

Section I

Maintenance of Combat Vehicles

5–1. General

Combat vehicles will be selected as candidates for recapitalization and overhaul during peacetime under the CVE program. MACOMs will report combat vehicles requiring depot maintenance support to, and receive disposition instructions from, the appropriate commodity command. Selection of equipment for overhaul:

- a.* Combat vehicles reaching a mileage or hour interval prescribed by USAMC will be inspected by depot-level teams to identify vehicles requiring overhaul. Only the vehicles meeting the scoring criteria will be directed for return to a USAMC depot. A copy of the evaluation will accompany the vehicle when it is sent to an overhaul facility. Approved repair candidates will be scheduled and turned in to depot maintenance shops per the CVE program. (See para 4–6 for transfer/turn-in standards.)
- b.* Combat vehicles that do not yet reach the prescribed mileage or hour threshold but are considered to be overhaul candidates by the user MACOM may be nominated by the MACOM for evaluation by the teams.
- c.* Combat vehicles requiring extensive modernization or recapitalization in a depot facility may be inducted without benefit of the combat vehicle evaluation. These vehicles will be overhauled/rebuilt to a like-new condition in conjunction with the modernization or recapitalization depot maintenance work request (DMWR), National Maintenance Work Requirement (NMWR), or scope of work.
- d.* When a replacement item is not available and the depot cannot overhaul and return it to user, the MACOM commander can authorize units to continue using the item at a low priority/low usage rate until a replacement is available.

5–2. ARNG maintenance

- a.* All depot maintenance for ARNG end items (except aircraft) will be on an exchange or repair-and-return basis. The aircraft depot repair program will be scheduled on an exchange basis. States will coordinate directly with supporting area TMDE support teams (ATSTs) for calibration services and calibration repairs provided to the State under NGB-funded programs. Surface equipment that requires unscheduled or urgent depot repair will be reported to NGB–ARL–M for consideration on a case-by-case basis, and aircraft in that condition will be reported to NGB–AVN. Army surface equipment will be selected for depot repair under the following criteria:

- (1) All major end items that are type-classified standard and meet condition requirements as determined by the commodity command concerned.
- (2) All major end items type-classified standard in an unserviceable condition beyond the capability of GS maintenance.
- (3) Major end items that have a record of frequent maintenance failure requiring extensive repairs and for which the recurring failures, if overhauled at a depot facility, would be cost-effective.
- (4) Combat vehicles will be selected for depot repair on a condition basis (not on mileage) when TI by GS maintenance indicates that depot repair is in the best interest of economy and readiness.
- (5) Towed and self-propelled artillery weapons, mortars, and recoilless rifles will be selected for depot repair per TMs.

- b.* Current year requirements:

- (1) For current year requirements, NGB–ARL–M will provide the commodity commands with the DD Form 448 (Military Interdepartmental Purchase Request) for major end items and calibration services/repair support. Calibration services and red tag repair of TMDE will be funded by NGB and provided by the TMDE support group ATSTs to States within the team's area of responsibility. A schedule for depot work input will be provided to each State